

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of the claims in the application:

Listing of Claims:

Claim 1 (currently amended): A bifurcated stent [for facilitating retrograde supply of oxygenated blood to heart tissue through a coronary sinus] comprising:

a main covered stent having a main stent covered by a graft and defining an opening, and having a leading end, and a trailing end wherein the main covered stent tapers in cross-sectional diameter toward the trailing end; and

a side limb having a side stent, wherein side limb is in contact with said main covered stent about said opening.

Claim 2 (original): The bifurcated stent according to claim 1, wherein said side stent is not attached to said main stent of said main covered stent.

Claim 3 (original): The bifurcated stent according to claim 1, wherein said limb further has a cuff that is attached to said graft of said main covered stent.

Claim 4 (original): The bifurcated stent according to claim 3, wherein said cuff is attached by being connected to said graft.

Claim 5 (original): The bifurcated stent according to claim 3, wherein said cuff is attached by being continuous with said graft.

Claim 6 (original): The bifurcated stent according to claim 3, wherein said side stent is not attached to said main stent of said main covered stent.

Claim 7 (original): The bifurcated stent according to claim 1, wherein said stent is attached to said main stent of said main covered stent.

Claim 8 (original): The bifurcated stent according to claim 7, wherein said side stent is attached by being connected to said main stent.

Claim 9 (original): The bifurcated stent according to claim 7, wherein said side stent is attached by being continuous with said main stent.

Claim 10 (original): The bifurcated stent according to claim 1, wherein cross section of said main covered stent varies along its extent.

Claim 11 (original): The bifurcated stent according to claim 10, wherein said cross section of said main covered stent tapers toward said leading end and said trailing end.

Claim 12 (original): The bifurcated stent according to claim 10, wherein said main covered stent exhibits a constriction near said leading end and a constriction near said trailing end.

Claim 13 (currently amended): The bifurcated stent according to claim 1, wherein a portion of said main covered stent has a constant cross section.

Claim 14 (original): The bifurcated stent according to claim 1, wherein said side limb and said opening have similar cross section.

Claim 15 (original): The bifurcated stent according to claim 1, wherein a cross section of said leading end is appropriately sized to control blood flow from said left ventricle into said main covered stent.

Claim 16 (original): The bifurcated stent according to claim 1, wherein a cross section of said trailing end is appropriately sized to control blood flow into a right atrium.

Claim 17 (original): The bifurcated stent according to claim 1, wherein cross section of said opening and said side limb are appropriately sized to control the amount of blood flowing into the retrograde portion of the coronary sinus.

Claim 18 (original): The bifurcated stent according to claim 1, wherein cross section of said trailing end, said leading end, said opening, and said side limb are appropriately sized to prevent pressure level within said coronary sinus from rising above about 50 mm Hg.

Claim 19 (original): The bifurcated stent according to claim 1, wherein cross section of said trailing end, said leading end, said opening, and said side limb are appropriately sized to prevent pressure level within the coronary sinus from rising above about half systemic pressure.

Claim 20 (original): The bifurcated stent according to claim 1, wherein said trailing end, said leading end, said opening, and said side limb are each from about 1 mm to about 6 mm in diameter.

Claim 21 (original): The bifurcated stent according to claim 20, wherein said trailing end, said leading end, said opening, and said side limb are each from about 2 mm to about 5 mm in diameter.

Claim 22 (original): The bifurcated stent according to claim 1, wherein said side limb and said opening have similar cross section.

Claim 23 (original): The bifurcated stent according to claim 1, wherein cross section of said side limb varies along its extent.

Claim 24 (original): The bifurcated stent according to claim 1, wherein said side limb is from about 1 mm to about 6 mm in diameter.

Claim 25 (original): The bifurcated stent according to claim 1, wherein said main covered stent and said side limb allow compression and expansion.

Claim 26 (original): The bifurcated stent according to claim 1, wherein said main covered stent and said side limb are flexible.

Claim 27 (original): The bifurcated stent according to claim 1, wherein said main covered stent and said side stent are of mesh construction.

Claim 28 (original): The bifurcated stent according to claim 1, wherein said main covered stent and said side stent are of coiled construction.

Claim 29 (original): The bifurcated stent according to claim 1, wherein said main covered stent does not exceed from about 6 mm to about 12 mm in diameter.

Claim 30 (original): The bifurcated stent according to claim 1, wherein said graft is inside said main stent.

Claim 31 (original): The bifurcated stent according to claim 1, wherein said graft is outside said main stent.

Claim 32 (original): The bifurcated stent according to claim 1, wherein said main stent is sandwiched between an inside graft and an outside graft.

Claim 33 (original): The bifurcated stent according to claim 1, wherein said main covered stent expands and forms a friction fit.

Claim 34 (original): The bifurcated stent according to claim 1, wherein a portion of said main stent near said trailing end is not covered by said graft.

Claim 35 (withdrawn): A method for facilitating retrograde supply of oxygenated blood from a left ventricle to heart tissue via a coronary sinus comprising:

puncturing a hole through said coronary sinus and a wall of said left ventricle,
delivering a bifurcated stent having a main covered stent with a main stent covered by a graft and having a leading end and a trailing end; and a side limb having a side stent, wherein said side limb is in contact with said main covered stent about an opening in said main covered stent,

wherein said opening is substantially aligned with a retrograde portion of said coronary sinus.

Claim 36 (withdrawn): The method according to claim 35, wherein said leading end is positioned within said left ventricle.

Claim 37 (withdrawn): The method according to claim 35, wherein an extension stent is used to reach said left ventricle.

Claim 38 (withdrawn): The method according to claim 35, wherein said trailing end is positioned near a coronary ostium.

Claim 39 (withdrawn): The method according to claim 35, wherein said trailing end is positioned in a right atrium.

Claim 40 (withdrawn): The method according to claim 35, wherein said side limb is positioned toward as retrograde portion of said coronary sinus.

Claim 41 (withdrawn): The method according to claim 35, wherein said main covered stent tapers cross sectionally toward the leading end and the trailing end.

Claim 42 (withdrawn): The method according to claim 35, wherein said main covered stent expands to make a friction fit within said coronary sinus.

Claim 43 (withdrawn): The method according to claim 42, wherein said friction fit prevents axial rotation and migration.

Claim 44 (withdrawn): The bifurcated stent according to claim 35, wherein cross section of said trailing end, said leading end, said opening, and said side limb are appropriately sized to prevent pressure level within the coronary sinus from rising above about 50 mm Hg.

Claim 45 (withdrawn): The bifurcated stent according to claim 35, wherein the cross section of said trailing end, said leading end, said opening, and said side limb are appropriately sized to prevent pressure level within the coronary sinus from rising above about half systemic pressure.

Claim 46 (withdrawn): The bifurcated stent according to claim 35, wherein said side stent is attached to said main stent.

Claim 47 (withdrawn): The bifurcated stent according to claim 35, wherein said side stent is not attached to said main stent, and said side stent is delivered after delivery of the main covered stent.

Claim 48 (withdrawn): The bifurcated stent according to claim 35, wherein said bifurcated stent is delivered percutaneously.

Claim 49 (currently amended): A bifurcated stent for facilitating retrograde supply of oxygenated blood to heart tissue through a coronary sinus comprising:

a main covered stent having a main stent covered by a graft and defining an opening, and having a leading end and a trailing end, wherein said main covered stent tapers in cross sectionally area toward said leading end and toward said trailing end, and

a side limb comprising a side stent, wherein said side limb is in contact with said main covered stent about said opening.

Claim 50 (new): The bifurcated stent according to claim 1, wherein said leading end is configured to be positioned in a left ventricle and said trailing end is configured to be positioned in a right atrium.